Int Journal of Social Sciences Management and Entrepreneurship 7(2): 884-893, 2023

ISSN 2411-7323

www.sagepublishers.com

DIGITAL FINANCIAL SERVICES AND SUSTAINABLE PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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ABSTRACT

This study sought to establish the effect of digital finance service on the sustainable performance of commercial banks in Kenya. Specifically, the study sought to assess the effect of point-of-sale platform on sustainable performance of commercial banks in Kenya. The study was anchored on Technology Acceptance Model (TAM). The study adopted a descriptive research design. The unit of analysis for the study was 43 commercial banks in Kenya while the unit of observation was top management employees (credit manager, finance manager, and operations manager). The target population was therefore 129 individuals comprising of one credit manager, finance manager, and operations manager from each of the 43 commercial banks in Kenya. This research used census sampling technique to select the study sample size. The sample size for the study was therefore 129 respondents. Primary data in this study was collected through use of structured questionnaires. The questionnaire was piloted with a group of 15 respondents from the study population. The collected quantitative data was prepared for statistical analysis before it's processed through checking and validation after the questionnaires are obtained from the field. Quantitative data was analysed by employing descriptive as well as inferential statistics with help of SPSS version 25. Additionally, descriptive statistics in this study consisted of mean, frequency distribution, percentages and standard deviation. The relationship between dependent and independent variables were established using correlation analysis and regression analysis. The study results were presented through use of tables and figures. The findings of this study benefit the government of Kenya and policy makers, the management of commercial banks, academicians and other researchers. To the government of Kenya and policy makers, the study provides information on digital finance service and the sustainable performance of commercial banks in Kenya. The study concludes that point of sale platform has a positive and significant effect on sustainable performance of commercial banks in Kenya.

Key Words: Digital finance service, Point-of-sale platform, Sustainable performance, Commercial banks

INTRODUCTION

Digital finance has been internationally regarded as an adequate means of providing opportunities to promote financial inclusion through reduction of costs of providing these services (Asian Development Bank, 2016). The utilization of computerized money related administrations has become essential to individuals who have practically zero past involvement with formal monetary administrations (Villasenor, Darrell & Lewis, 2015). The expansion of digital payment platforms has offered the opportunity to link poor people with providers of savings, credit, and insurance products (Radcliffe & Voorhies, 2016).

Since 2010, the G-20 and the World Bank have led the initiative for increased financial inclusion in developing countries to help reduce poverty levels in developing and emerging economies (GPFI, 2010). Today, the relevance of digital finance and financial inclusion for poverty reduction and economic growth is attracting the attention of policy makers and academics, largely because of the number of issues that persist which if addressed can make digital finance work better for individuals, businesses, governments and the economy (Radcliffe & Voorhies, 2016). Digital finance has several benefits to financial service users, digital finance providers, governments and the economy such as increasing access to finance among poor individuals, reducing the cost of financial intermediation for banks and Fintech providers, and increasing aggregate expenditure for governments (McKee, Kaffenberger & Zimmerman, 2017).

Mexico digital financial services is driven by the fintech community. Mexico is home to the largest number of fintech startups in Latin America – over 400 as of 2020. 51% of households have access to the internet and 64% have a smartphone, the reason why founders view Mexico as an attractive market. Further, Mexico boasts a tech-savvy population, with 30% of Mexicans classified as digitally native, an easier segment to target with digital financial offerings ("Digital Transformation in Financial Services: The Age of Fintech," 2021). Banks in North America, Europe, Asia- Pacific and Latin America spent a total of $241billion on information technologies in the year 2016 and an overall increase of almost 4% when compared with the year 2015 (Gareth *et al.,* 2016). They also reiterated that the practice of digitalizing services carried out by financial institutions gives a new turn to service provision and make for better customer satisfaction as a result of diversity in service provision.

In South Africa, Carletti (2017) revealed that the institutions that adopted an effective digitalization strategy were able to increase their sales and revenue by 4% to 16% through the instrumentation of enhanced customer relationship. In Ghana, Dayadhar, (2015) established that digital financial services are held out as key money related answers for enhancing monetary consideration. The methodology of DFS has presented positive effect by initiating neighborhood and rustic economies through expanded cash dissemination, business development and work opportunities.

In Kenya, digital financial services have been a runaway example of overcoming adversity and the entrance to a formal budgetary administration enhanced from 19% in 2006 to 67% in 2013, which corresponds with the ascent of computerized money related administrations in Kenya. A large portion of the country tenants in Kenya have replied that they have used either or a blend of monetary administrations that is banks, funds and credit co-agents, microfinance establishments, computerized monetary administrations suppliers or casual gatherings (European Investment Bank, 2014). Kenya has made critical steps in progressing monetary incorporation as of late, as confirmed by an increment of 33 percent in the level of record infiltration at a formal budgetary foundation or portable cash supplier somewhere around 2011 and 2014.

Notable revolutionized digital service provision sector innovation, namely M-PESA, Agency Banking, Online Banking, ATM credit/debit cards, M-Shwari have been registered (Heyer & King, 2015), and accounts for more than 76% of banking transactions, and distinctively, commercial banks credit advanced through mobile platform stand high at 81% according to FinAccess Digital Credit Tracker (2017). This is a clear indication that DFS could be driving banks financial performance.

However, Kenya banking sector have been registering declined performance, with pre-tax profit decreased by 9.6%, total income decreased by 3.1%, total expenses; and a consistent decline in RoE and RoA at an average rate of 0.6% and 3.8% respectively since late 2016 (CBK, 2020). Further to that, share of fees and commission – mainly earned from DFS - has consistently been on a downward trajectory, declining from about 25% in 2016 to 14% by the end of 2018 (KBA, 2018). Therefore, there could be a possibility that decline in the industry could be as a result of decline in the non-interest income generated from DFS.

Statement of the Problem

Commercial banks, mainly due to their intermediation function play a crucial role in the financial sector of any country in the world (Opiyo, 2021). The banking sector worldwide has undergone significant changes in its operating environment, especially in terms of its structure and sustainable performance (Okello, 2016). However, Kenya banking sector have been registering declined performance, with pre-tax profit decreased by 9.6%, total income decreased by 3.1%, total expenses and a consistent decline in return on equity and return on assets at an average rate of 0.6% and 3.8% respectively since late 2016 (Bryman, & Bell, 2016). Therefore, there could be a possibility that decline in the industry as a result of decline in the non-interest income generated from digital financial services. In Kenya, digital financial services have been a runaway example of overcoming adversity and the entrance to a formal budgetary administration enhanced from 19% in 2006 to 67% in 2013, which corresponds with the ascent of computerized money related administrations. Bayero, (2015) indicates that digital financing has enabled a cashless global market in which no-need-for-hard-cash to conduct business transactions has been created thus transforming banking operation. Studies on digital financial services on bank performance have been conducted across the globe and mixed results have been reported, with construct of DFS having significant effect on financial performance (Mohamed, 2019; Waiganjo, 2018; Too, Ayuma & Ambrose, 2016; Mabwai, 2016; Ngaruiya, Bosire & Kamau, 2018) and contradictory findings of insignificant or negative effects (Michelle, 2016; Dzombo, Kilika & Maingi, 2018; Ali, 2018). The variation in results necessitates an empirical exploration of the same on digital service delivery platforms –relatively standardized across the globe - as oppose to service products. Thus, the study sought to explore effect of point-of-sale platform on sustainable performance of commercial banks in Kenya.

Objectives of the Study

i. To assess the effect of point of sale platform on sustainable performance of commercial banks in Kenya.

LITERATURE REVIEW

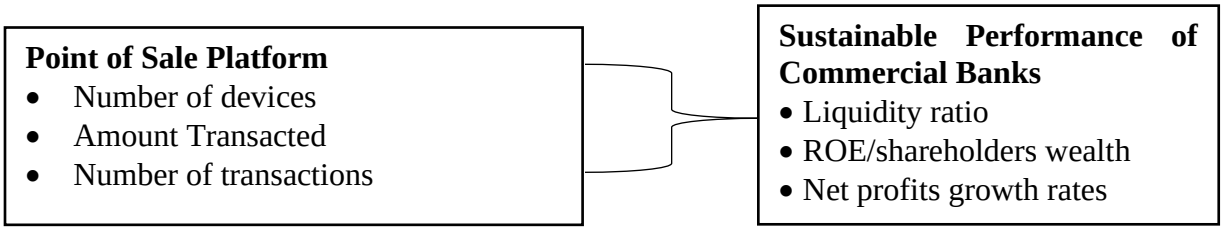
Theoretical Review

Technology Acceptance Model (TAM)

This model was put forward by Davis in 1986. The theory expounds on attitude behind the urge to employ technological knowhow (Monyoncho, 2015). TAM deals with perceptions and not systems real usage and argues when new technological advancement is introduced to the customers, either one of this occurs that is, Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) influence

their decision (Lule, Omwansa & Waema, 2016). PEOU is the level of confidence that people put on a system and if users perceive a new technology to be beneficial in support of both short and long-run, there is that encouragement to use the system. Further, the level by which an individual considers a system will boost performance in the short and long-run is the PU (Mojtahed, Nunes & Peng, 2017). TAM can be used to explain the digital financial services which can be applied in clarifying the existence of variations in consumer behaviors especially when it comes to use of related digital financial services (Lim & Ting, 2016).

Conceptual Framework



Point of Sale Platform

A point-of-sale platform is software that supports the completion of a retail transaction. Primarily used in retail locations, these platforms may be integrated into a variety of other systems to provide benefits in addition to simplifying the sales transaction. All the transactions in digital payments are completed through online. The point of sale (POS) or point of purchase (POP) is the time and place where a retail transaction is completed. At the point of sale, the merchant calculates the amount owed by the customer, indicates that amount, may prepare an invoice for the customer (which may be a cash register printout), and indicates the options for the customer to make payment. It is also the point at which a customer makes a payment to the merchant in exchange for goods or after provision of a service. After receiving payment, the merchant may issue a receipt for the transaction, which is usually printed but can also be dispensed with or sent electronically.

According to Okello (2016), commercial banks provide basic banking services and products to the general public, individual consumers and small to mid-sized businesses alike. Providing digital banking service simply means that the deployment of banking services and products (such as opening new bank accounts, creating checking and savings accounts, transfers, etc.) are provided directly to customers over electronic and internet driven communication networks. Opiyo (2021) holds that the shift from traditional banking services toward the modern preference for mobile banking apps or digital formats has been gradual. Initially, both banks and customers were cautious about this transition. However, the demand to offer services on digital platforms grows strong as people realize the potential of digital banking platforms, how it can improve customer relationships, brand image and increase the efficiency of online banks becomes apparent.

The rapid advancement of technology in recent years has led to a significant increase in the use of digital payments in our daily lives. Digital payments offer a wide range of new and convenient services (Agboola et al., 2014) that are becoming increasingly popular among consumers. The increased popularity of digital payments has been further accelerated by the demonetization efforts in many countries (Opiyo, 2021). The government and private sector are recognizing the growing importance of digital payments and are working to fully utilize this opportunity. The emergence of new technologies and the need for global business transactions have also contributed to the growing popularity of digital payments (Agboola et al., 2014). The digital payments have become a key enabler of financial inclusion and digital economy. Furthermore, it offers a secure, fast and convenient way of making transactions, which is contributing to the growth of e-commerce and

online businesses.

Empirical Review

Point of Sale Platform and Sustainable Performance of Commercial Banks

The study by Kim et al. (2020) examined the impact of point-of-sale (POS) systems on sustainable performance in small and medium-sized enterprises (SMEs) in South Korea using a quantitative research method. The study used a survey design, with a sample of SMEs that had implemented POS systems and a control group of SMEs that had not implemented POS systems. The target population for the study was SMEs in South Korea. The sample was selected using a stratified random sampling method, with the strata being based on the type of industry and the size of the enterprise. A total of 300 SMEs were included in the study, with 150 in the POS group and 150 in the control group. The data collection instrument used in the study was a structured questionnaire. The data collected was analyzed using descriptive statistics, chi-square tests, and independent sample t-tests. The study found that the implementation of POS systems had a positive impact on sustainable performance in SMEs, as measured by indicators such as energy consumption, waste reduction, and resource management.

The study by Lu et al., (2018) examined the impact of point-of-sale (POS) systems on sustainable performance in restaurants using a quantitative research method. The study adopted a survey design, with a sample of restaurants that had implemented POS systems and a control group of restaurants that had not implemented POS systems. The target population for the study was restaurants in China. The sample was selected using a convenience sampling method, in which the researcher's selected participants who were easily accessible and willing to participate in the study. A total of 130 restaurants were included in the study, with 65 in the POS group and 65 in the control group. The data collection instrument used in the study was a structured questionnaire. The data collected was analyzed using descriptive statistics, chi-square tests, and independent sample t-tests. The study found that the implementation of POS systems had a positive impact on sustainable performance in restaurants, as measured by indicators such as food waste reduction, and energy consumption.

Okello (2016) conducted a study on the effect of electronic retail payment services on financial performance of commercial banks in Kenya. The target population for the study comprised of the forty-three commercial banks for a time of five years from 2011 to 2015. The findings established that the adoption/use of electronic retail payment services has improved the performance in the banking industry through ensuring its productivity and efficiency is greatly improved. Electronic retail payment services have brought about a positive effect on the overall operations within the banking industry through making work easier for the management as well as the employees since it has been found to be the most effective and efficient service. Essentially, the adoption of such electronic retail payment services has greatly improved the prosperity of the Kenyan commercial banks. Since the innovation improved the performance and prosperity of commercial banks, there is need to develop more measures aimed at promoting the adoption of electronic retail payment services. Nevertheless, this study failed to show the influence of unified payment interface, point of sale (POS) devices and mobile based payment on sustainable performance hence the study findings cannot be generalized to the current study. Gaonkar (2018) sought to explore various payment instruments available to the people, and its benefits. The study was conceptual. It used data from reports of RBI, GOI, NPCI, etc. Study revealed that various new instruments are emerging. Benefits of going cashless increased transparency, efficiency and convenience, easier tracking, etc.

Rakesh, Kumar, and Kumar (2018) examined the present scenario of electronic payments and to

study the range of service facilities that UPIBHIM technologies offer. Analytical and critical method of research was used in the study. And data was collected from the secondary sources such as journals, government websites and news articles. Electronic transactions have increased. This could happen only with extensive recognition and acceptance of popular instruments such as credit and debit cards, net banking and e-wallets by the Indian population. But surprisingly, UPI came out to be the real distinct advantage. The study should have considered primary data sources and since the study was limited to India, the findings cannot be generalized to Kenya.

Chen and Nath (2018) sought to identify factors that influence consumer m-Payment adoption in the United States. Data was collected from 299 respondents and analyzed using Confirmatory Factor Analysis and ANOVA. Perceived Transaction convenience, compatibility, Perceived Transaction Speed, Privacy Concerns, Security Concerns. The results suggested that higher transaction speed, transaction convenience, and compatibility perceptions would lead to high propensity to adopt m-Payment while grater security and privacy concerns would lead to lower propensity to adopt m-Payment. Among all the constructs, Compatibility has the highest correlation with Intention to Adopt. These results may not be generalized in Kenyan perspective due to differences in state of economic and technological developments.

İkramDaştan and CemGürler (2016) study aimed to examine the factors which affect the adoption of mobile payment systems by the consumer; an empirical analysis. Convenience sampling method was used to survey 225 respondents online. Developed a research model and tested the proposed relationships by SEM. Perceived reputation, environmental risk, mobility, trust, perceived usefulness, perceived ease of use A negative relationship was found between environmental risk and perceived trust whereas a positive relationship was found between firm reputation and perceived trust. Perceived usefulness and perceived ease of use are the factors which do not have any effect on Adoption of MPS. Perceived trust, perceived mobility and attitude have a positive effect on the adoption of MPS. To minimize likelihood of subjective responses the study ought to have adopted random sampling technique.

RESEARCH METHODOLOGY

The study adopted a descriptive research design. The unit of analysis for the study was 43 commercial banks in Kenya while the unit of observation was top management employees (credit manager, finance manager, and operations manager). The target population was therefore 129 individuals comprising of one credit manager, finance manager, and operations manager from each of the 43 commercial banks in Kenya. This research used census sampling technique to select the study sample size. The sample size for the study was therefore 129 respondents. Primary data in this study was collected through use of structured questionnaires. The questionnaire was piloted with a group of 15 respondents from the study population. The collected quantitative data was prepared for statistical analysis before it's processed through checking and validation after the questionnaires are obtained from the field. Quantitative data was analysed by employing descriptive as well as inferential statistics with help of SPSS version 25.

RESEARCH FINDINGS AND DISCUSSIONS

Response rate

The researcher sampled 129 respondents who were each administered with the questionnaires. From the 129 questionnaires 119 were completely filled and returned hence a response rate of 92.2%. The response rate was considered as suitable for making inferences from the data collected. Smith (2011) indicates that a response rate that is above fifty per-cent is considered adequate for data analysis and reporting while a response rate that is above 70% is classified as excellent. Hence,

the response rate of this study was within the acceptable limits for drawing conclusions and making recommendations.

Descriptive Analysis of the Variables of the Study

Digital Saving and the Sustainable Performance of Commercial Banks

Table 1 indicate the results on the statements regarding the effect of point-of-sale platform on sustainable performance of commercial banks in Kenya. The respondents agreed that the organization has adopted unified payment interface. This is supported by a mean of 3.968 (std. dv = 0.905). In addition, as shown by a mean of 3.859 (std. dv = 0.885), the respondents agreed that the organization has established point of sale devices. Further, the respondents agreed that mobile based payment has been established in the organization. This is shown by a mean of 3.800 (std. dv = 0.605). With a mean of 3.705 (std. dv = 0.981), the respondents agreed that digital payment services are effective. The respondents also agreed that there are few complaints from customers concerning the functioning of the digital payment services adopted. This is shown by a mean of 3.701 (std. dv = 0.973). The respondents also indicated that the adoption/use of electronic retail payment services has improved the performance in the banking industry through ensuring its productivity and efficiency is greatly improved. In addition, the respondents agreed that electronic retail payment services have brought about a positive effect on the overall operations within the banking industry through making work easier for the management as well as the employees since it has been found to be the most effective and efficient service.

Table 1: Point of Sale Platform and Sustainable Performance of Commercial Banks

	5	4	3	2	1	Mean	Std. Deviation
Our organization has adopted unified payment interface	49.1	29.8	7.0	7.0	7.0	3.968	0.905
The organization has established point of sale devices	38.6	24.6	22.8	14.0	0.0	3.859	0.885
Mobile based payment has been established in the organization	28.1	47.4	7.0	10.5	7.0	3.800	0.605
Digital payment services are effective	24.6	42.1	15.8	7.0	10.5	3.705	0.981
There are few complaints from customers concerning the functioning of the digital payment services adopted	21.1	42.1	15.8	10.5	10.5	3.701	0.973
Aggregate						**3.819**	**0.867**

Inferential Analysis

Correlation Analysis

The results in Table 2 revealed that there was a very strong relationship between point-of-sale platform and sustainable performance of commercial banks in Kenya (r = 0.856, p value =0.000). The relationship was significant since the p value 0.000 was less than 0.05 (significant level). The findings are in line with the results of Kim *et al.* (2020) who revealed that there is a very strong relationship between point-of-sale platform and organization performance.

Table 2: Summary of Pearson's Correlations

		Sustainable Performance	Point Of Sale Platform
	Pearson Correlation	1	
	Sig. (2-tailed)		
Sustainable Performance	N	119	
	Sig. (2-tailed)	.000	
	N	.119	
	Pearson Correlation	.856**	1
Point of Sale Platform	Sig. (2-tailed)	.000	
	N	119	119

Regression Analysis

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.940[a]	.884	.885	.582

Table 4: Analysis of Variance

	Sum of Squares	d.f	Mean Square	F	Sig.
Regression	12.027	4	3.018	52.395	.000[b]
Residual	6.568	114	.0576		
Total	**18.595**	**118**			

Table 5: Regression of Beta Coefficient and Significance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.311	0.082		3.793	0.003
	Point of sale platform	0.392	0.102	0.393	3.843	0.001

a Dependent Variable: sustainable performance of commercial banks

The r-squared for the relationship between the independent variables and the dependent variable was 0.884. This implied that 88.4% of the variation in the dependent variable could be explained by independent variable. F calculated was 52.395 while the F critical was 2.451. The p value was 0.000. Since the F-calculated was greater than the F-critical and the p value 0.000 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the influence of point-of-sale platform on sustainable performance of commercial banks in Kenya. In addition, the results revealed that point of sale platform has significant effect on sustainable performance of commercial banks in Kenya $\beta 1=0.392$, p value= 0.001). Meaning a unit improvement in point-of-sale platform would result to 0.392-unit improvement in sustainable performance of commercial banks in Kenya. The relationship was considered significant since the p value 0.001 was less than the significant level of 0.05. The findings are in line with the results of Kim *et al.* (2020) who revealed that there is a very strong relationship between point-of-sale platform and organization performance. The results also revealed that digital credit has significant effect on sustainable performance of commercial banks in Kenya with $\beta 1=0.386$ and p value= 0.000. Meaning a unit improvement in digital credit would result to 0.386-unit improvement in sustainable performance of commercial banks in Kenya. The relationship was considered significant since the p value 0.000 was less than the significant level of 0.05. The findings conform

to the findings of Hwang and Telez, (2016) that there is a very strong relationship between digital credit and organization performance.

Conclusion

The study also concludes that point of sale platform has a positive and significant effect on sustainable performance of commercial banks in Kenya. Findings revealed that number of devices, amount Transacted and number of transactions influence sustainable performance of commercial banks in Kenya. This implies that a unit improvement in point-of-sale platform would lead to improved performance of commercial banks in Kenya.

Recommendations of the Study

The study also found that point of sale platform has a positive and significant effect on sustainable performance of commercial banks in Kenya. This study therefore recommends that the management of commercial banks in Kenya should ensure effectiveness in point-of-sale platform.

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